

Office Action Summary

Application No.

10/591,460

Applicant(s)

SHIGITA ET AL.

Examiner

TANISHA DIGGS

Art Unit

4151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS)
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date herewith.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date 9/01/2006

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1-6, 9-10, drawn to an antiviral fiber.

Group 2, claim(s) 7-8, drawn to method of making antiviral fiber.

2. The inventions listed as Groups 1 and 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature in both Group 1 and 2 is the antiviral fiber having cross-linked structure, carboxyl group and fine metal particles. This element can not be a special technical feature under PCT Rule 13.2 because the elements are shown in the prior art. Japanese Reference JP9241967 teaches the antiviral fiber and its production as claimed in claim 1 and 7 at least, wherein it teaches: a fiber with functions such as antibacterial, antifungal and deodorizing properties, etc., which are inherent to metal fine particles by depositing specific metal fine particles in a porous fiber having polar groups capable of ion exchanging or ion coordinating, and cross-linking structures. This metal fine particle-containing fiber is obtained by forming a fiber or porous body from an acrylonitrile polymer having a hydrazine cross-linked structure, polar groups capable of

ion exchanging or ion coordinating by converting $\geq 0.01\%$ of the residual nitrile groups into carboxyl groups. At least one metal ion selected from a group consisting of Cu, Zn, Ag. (Abstract).

3. During a telephone conversation with Attorney King Wong on 3/11/09 and Office of Attorney King Wong on 3/13/09 a provisional election was made without traverse to prosecute the invention of Group 1, claims 1-6, 9-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process

claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim Objections

6. Claim 3 is objected to because of the following informalities: The phrase "and a metal compound thereof" of Claim 3 is redundant. Appropriate correction is required.
7. Claim 5 is objected to because of the following informalities: Use of the word "cottony" of Claim 5 is improper. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoko et al (JP9241967, hereafter '967 (already of record, translation provided)).
10. Regarding claims 1 and 3, '967 teaches a fiber with functions such as antibacterial, antifungal (which reads on claimed antiviral) and deodorizing properties, etc., which are inherent to metal fine particles by depositing specific metal fine particles in a porous fiber having polar groups capable of ion exchanging or ion coordinating, and cross-linking structures. This metal fine particle-containing fiber is obtained by forming a fiber or porous body from an acrylonitrile polymer having a hydrazine cross-linked structure, polar groups capable of ion exchanging or ion coordinating by converting $\geq 0.01\%$ of the residual nitrile groups into carboxyl groups. At least one metal ion selected from a group consisting of Cu, Zn, Ag (which reads on the claimed metal's poor solubility in water) (Abstract).
11. Regarding claim 2, '967 teaches the carboxyl group which is easy to form especially a metal ion, a complex, or salt is especially excellent (Spec, Paragraph 8).
12. Regarding claim 5, '967 teaches it can considered as processed goods, such as paper, a nonwoven fabric, knitting and textiles (Spec, Paragraph 46).
13. Regarding claims 4, 6 and 9-10, '967 teaches the silver content of the obtained fiber was 1.5% (Spec, Paragraph 40).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANISHA DIGGS whose telephone number is (571)270-7730. The examiner can normally be reached on Mon-Thurs, 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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***/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4151***